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<sup>3</sup> The Mitsuba of Japan:  
A New Hardy Vegetable.

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<sup>22</sup> Office of Foreign Seed and Plant Introduction.

<sup>2</sup> U. S. Bureau of Plant Industry,

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Washington.

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## THE MITSUBA OF JAPAN: A NEW HARDY VEGETABLE.

By David Fairchild.

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Mr. Barbour Lathrop has discovered and presented to the Office of Foreign Seed and Plant Introduction of the United States Department of Agriculture a new and very promising hardy vegetable for our gardens. It is, curiously enough, a common wild plant of the American continent, being scattered pretty well over America from New Brunswick to South Dakota and southward to Georgia and Texas. Botanically it is known as *Deringa canadensis* (L.) Kuntze; it belongs to the family which has furnished a number of our good garden vegetables such as celery, the carrot, and the parsnip.

In presenting the seed of this new vegetable, Mr. Lathrop sends us the following information obtained in an interview with the Yokohama Nursery Company: "Udo costs more than mitsuba, and far less of it is consumed by the poor. Every part of the mitsuba is edible, and its leaves, stems, and roots are cooked as desirable vegetables. Like udo, it is grown from seed, and in rather light soil. It requires less time for maturing than udo, and is procurable on the market at far less expense. Mitsuba is popular with everybody from the highest rank to the lowest. Besides being cooked, the stems are eaten as we eat celery."

How long ago the Japanese began to use mitsuba I have been unable to determine, but certainly for some time, for the literature as far back as 1895 describes it as a common vegetable there. Paillieux and Bois in their remarkable *Le Potager d'un Curieux*, written in 1899, give an account of its trial in France and recommend it to amateurs to be used as greens, like spinach and chicory. The blanched leaves were tried but pronounced inferior to the Barbe de Capucin (*Nigella damascena*). There is no evidence, however, that the plant was given more than a single test, and the resulting opinion probably represents a very few palates. The above writers remark that the plant is very hardy but that the seeds germinate slowly.

The seed sent in by Mr. Lathrop has placed this





**DIGGING BLANCHED MITSUBA IN JAPAN.**

(DERINGA CANADENSIS, S. P. I. No. 43167.)

This popular Japanese vegetable is grown in rows in rich, loose soil. The plants are mounded up and blanched in February and digging begins in March. The furrows shown in the background are about 12 inches deep. The seed was sown in the rows the previous May and the plants were cultivated through the season until the following November. It is a curious fact that this same species of umbellifer or one almost identical with it occurs as a wild plant from Canada to the Gulf of Mexico, but nowhere in America has it been cultivated.





**PREPARING BLANCHED SHOOTS OF MITSUBA FOR MARKET.**

The 1-year-old plants are blanched by means of mounding the soil over them or by digging them and forcing them in a hotbed. These blanched shoots are eaten raw, like celery, cooked like asparagus, or used for flavoring soups, etc., much as celery is used. Its consumption in Japan is very great, and its flavor is acceptable to discriminating Americans, according to Mr. Barbour Lathrop, who has called it to the attention of American gardeners.



Office in a position to supply experimenters with small quantities of seed of this new vegetable. Preliminary trials of it are already being conducted by about a hundred cooperating experimenters in different parts of the country, and the reports on its success will be available later.

Pai ts'ai has found its niche in our agriculture, and large quantities are being consumed; and udo is being grown by a large number of amateurs who have learned to like it. This new vegetable, mitsuba, also from the Orient, may find its place beside them. The ease of culture of mitsuba; the fact that the plant can be grown over such a wide range of territory; and the excellence of its green leaves, blanched shoots, and roots, for use in a variety of ways, should appeal to our practical sense and induce us to give it a careful test under widely varying conditions and through a number of seasons. Especially should it be tried on celery lands, - in the northern states, along the Gulf coast, and in California, - to determine its possible economic importance and to see if it has any points of advantage over celery.

Since the sending out of the seed for the preliminary trials, a fuller description of mitsuba, with photographs, has come to us from the Yokohama Nursery Company, and with the aid of these data the following suggestions for culture and cooking have been prepared.

#### PLANTING DIRECTIONS.

In general, the practice followed in the sowing of celery seed should prove equally successful with mitsuba. Or, the seed can be sown thin in rows far enough apart ( $2\frac{1}{2}$  to 3 ft. is the usual distance) to permit cultivation; the seedlings should be thinned out when an inch or so tall, leaving the plants 2 to 4 inches apart. A light shade, such as is afforded by beans or some grain crop, is advantageous, - for the plants do best in moist, partially shaded ground. If the seed is sown after hot weather comes on, it frequently fails to germinate, and it is therefore essential to sow it early in the spring in the north, or during the cool season in the south. To stimulate vigorous growth of the plants, application of liquid manure, bone meal, or a commercial celery fertilizer in amounts similar to those employed by celery growers, should be made. The object is to encourage the production of large and vigorous roots so that they will send up strong succulent shoots for blanching in the spring.



After the leaves and stalks die in the fall, the roots may be dug and forced by planting them closely in a dark pit or forcing frame, on top of a layer of horse manure covered with a thin layer of soil. For the main crop, however, the plants may be left standing in the field, and covered with 5 or 6 inches of soil just before growth starts in the early spring in order to blanch the new shoots.

The roots, being perennial, can be grown in the same rows for 2 or 3 years; but since they are edible, they are generally dug and used like carrots. The young blanched shoots keep better if left attached to the roots, and for shipping to market this method is preferable.

In the winter time, in cold regions like the North Island of Japan, it is necessary to have the roots well covered with earth to prevent their freezing. Some plants should be kept for 2 years, as seed producers; the seed produced by one-year-old plants is considered worthless, as the plants produced from it run to seed the first year. The seeds keep their vitality for three years. Twenty pounds is sufficient to sow an acre of land.

While there is very little relation between the profits per acre in Japan and possible profits in America, it is interesting to note that during the seasons of 1917 and 1918 \$200 (probably gross) per acre was realized from an average crop of mitsuba in Japan.

Although the plant will probably grow on a wide range of soils, those best suited to its culture are light, black soils, such as experience has shown are best adapted to celery growing. As already stated, it is essential that the soil be kept moist, especially during the period of germination of the seed.

#### COOKING DIRECTIONS.

The green leaves and stalks are eaten raw with a salad dressing; they may also be chopped fine and used as flavoring for soups. The young blanched shoots are eaten raw like celery, or, after being boiled, are served, like asparagus, with a white sauce, on toast. The roots, after the young blanched stalks are cut off, may be chopped into small pieces, fried with oil or butter until tender, and served either with sugar or a sauce,— in Japan soy sauce is used, and in this country tomato sauce might take its place.

Experimenters are urged to use their ingenuity in devising new recipes for the preparation of mitsuba.











